

## REMARKS

Claims 1-2, 4, and 6-13 are pending herein.

I. The obviousness rejections of claims 1, 2, and 4 based on Tung (US 6,789,439) and Harvie (US 1,898,956), as noted on page 2 of the Office Action.

The USPTO respectfully rejects claims 1, 2, and 4 under 35 U.S.C. § 103(a) as being unpatentable over Tung in view of Harvie. Claim 1 is an independent claim.

A. The cited references do not teach or suggest a move preventing part for preventing movement of the rack member, as claimed in claim 1.

Claim 1 claims in relevant part:

“wherein the tooth-missing gear is provided with a gear part formed with teeth around an entire circumference and structured to engage with the gear, and a tooth-missing gear part, and a teeth part is formed at a predetermined position of the tooth-missing part over only a part of the entire circumference in a circumferential direction of the tooth-missing gear, **and a side area in the circumferential direction of the teeth part is formed with a move preventing part for preventing movement of the rack member.**” (emphasis added)

No new matter is added by the amendments. Support for the amendments is found in paragraphs [0025] and [0032] of the present specification. Regarding these amendments, it is respectfully not seen where the cited references teach or suggest the claimed structure quoted above.

For example, the USPTO respectfully argues on page 2 of the Office Action that Figure 2 of Tung teaches a tooth missing gear 14 having a tooth-missing gear part and a teeth part 141. However, regarding the amendments, **Tung does not teach or suggest at all that a side area in the circumferential direction of the teeth part 141 is formed with a move preventing part for preventing movement of the rack member**, as claimed in claim 1.

Additionally, Harvie does not overcome this deficiency in the primary reference Tung because Harvie does not teach or suggest anything regarding a move preventing part.

In contrast, present Figure 3(A) illustrates at least one possible embodiment of the claimed structure quoted above. For example, present Figure 3(A) shows a tooth-missing gear 46 having a thin plate part 464a. As explained in paragraph [0032] of the present specification, **when baffle 7 is in a fully closed state, thin plate part 464a is engaged with the first tooth**

**part 471 and the third tooth part 473 of the first rack part 47 as a move preventing part and thus movement of the rack member 8 is prevented.** In other words, thin plate part 464a is one possible embodiment of a move preventing part for preventing movement of the rack member, as claimed in claim 1.

The distinction noted above is important and non-trivial because it results in significant advantages over conventional devices. For example, as explained in paragraph [0058] of the present specification, the structure of claim 1 allows for **control circuits of a motor actuator to be simplified.**

Thus, it is respectfully asserted that the cited references, taken either alone or in combination, do not teach or suggest all of the limitations of independent claim 1. Therefore, it is respectfully asserted that independent claim 1 is allowable over the cited references.

#### **B. Further explanation.**

Applicants respectfully note the following detailed further explanation regarding the Tung reference.

In Tung, the teeth 141 are formed over a wider range in the circumferential direction. Thus, if the teeth 141 are engaged with both of the row of teeth 133 and the row of teeth 134 at the same time, the row of teeth 133 or the row of teeth 134 of the slide block 13 or the teeth 141 of the fan-shaped gear 14 may be broken.

In order to prevent this problem, it is conceivable that the teeth 141 are formed over a narrower range in the circumferential direction. In other words, the number of the teeth 141 is reduced, for example, three or four teeth, so that after the teeth 141 have been completely separated from one of the row of teeth 133 and the row of teeth 134, the teeth 141 is set to engage with the other.

However, a situation may occur that the teeth 141 are not engaged with both of the row of teeth 133 and the row of teeth 134 and, in this case, the slide block 13 may be easily movable and thus the stop position of the slide block 13 cannot be maintained.

In order to maintain the stop position of the slide block 13, it is possible, for example, by means of that the teeth 141 are stopped under the condition that at least one of the teeth 141 is engaged with the row of teeth 133 or the row of teeth 134. however, in this case, at the next

rotation start time of the teeth 141, the slide block 13 is firstly moved toward one side and then the slide block 13 is moved to the other side. therefore, the slide block 13 cannot be stopped at the most moved end position.

#### C. The dependent claims.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2 and 4 are also allowable.

#### II. The obviousness rejection of claim 6 based on Tung in view of Harvie and JP 2000-230955.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that JP 2000-230955 does not overcome the deficiencies in Tung and Harvie as noted above in Section I regarding independent claim 1. Therefore, it is respectfully asserted that dependent claim 6 is also allowable.

#### III. New claims 7-13.

Applicants respectfully note that new claims 7-13 are added. No new matter is added by the amendments. Support for the amendments is found in original claims 1, 2, and 4 and in paragraphs [0025] and [0032] of the present specification.

IV. Conclusion.

Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicant seeks to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

By: /Daniel P. Lent/

Daniel P. Lent

Registration No. 44,867

Date: July 2, 2010  
CANTOR COLBURN LLP  
20 Church Street, 22<sup>nd</sup> Floor  
Hartford, CT 06103  
Telephone (860) 286-2929  
Facsimile (860) 286-0115  
Customer No.: 23413